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DOCKET NO.: DIBIS-0002US.P4 (Counsel Docket No. 10448)

PATENT

In the Claims:

The current status of all claims is listed below and supersedes all previous lists of claims.

1. (currently amended) A method of identifying one or more bioagents in a sample comprising the steps of:

selecting at least one pair of oligonucleotide primers, wherein one member of said pair of primers hybridizes to a first conserved region of nucleic acid encoding a ribosomal RNA and the other member of said pair of primers hybridizes to a second conserved region of nucleic acid encoding said ribosomal RNA wherein said first and second conserved regions flank a variable nucleic acid region that when amplified creates unique base composition signatures ~~varies in base composition~~ among at least eight bioagents;

obtaining a sample suspected of comprising at least one bioagent;

amplifying nucleic acid from one or more of said at least one bioagent with said pair of oligonucleotide primers to produce an amplification product;

determining the molecular mass of said amplification product by mass spectrometry;

calculating the base composition of said amplification product from said molecular mass; and

identifying one or more of said at least one bioagent in said sample by comparing said calculated base composition to ~~[[8]]~~ nineteen or more previously calculated or measured base compositions of amplification products from known bioagents, the amplification products being produced by using said at least one pair of primers.

2. (original) A method of claim 1 wherein the sample is an environmental sample.

3. (canceled)

4. (original) A method of claim 2 wherein the environmental sample is a water sample.

5. (original) A method of claim 2 wherein the environmental sample is a soil sample.

6. (original) A method of claim 2 wherein the environmental sample is a surface swab

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sample.

7. (original) A method of claim 2 wherein the environmental sample is from a building or a container.

8. (original) A method of claim 1 wherein the sample is a product sample.

9. (original) A method of claim 8 wherein the product sample is a foodstuff.

10. (original) A method of claim 8 wherein the product sample is a cosmetic.

11-13. (canceled)

14. (original) A method of claim 1 wherein the molecular mass of the amplification product is determined by ESI-TOF mass spectrometry.

15-16. (canceled)

17. (previously presented) A method of claim 1 wherein said one or more bioagents is a bacterium, mold, fungus or parasite.

18-27. (canceled)

28. (previously presented) A method of claim 1 wherein said identifying step identifies said one or more bioagents at the genus level.

29. (previously presented) A method of claim 1 wherein said identifying step identifies said one or more bioagents at the species level.

30. (previously presented) A method of claim 1 wherein said identifying step identifies said one or more bioagents at the sub-species level.

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31. (currently amended) A method of identifying one or more bioagents in a sample comprising the steps of:

selecting at least one pair of oligonucleotide primers, wherein one member of said pair of primers hybridizes to a first conserved region of a nucleic acid encoding a protein that participates in translation, replication, recombination and repair, transcription, nucleotide metabolism, amino acid metabolism, lipid metabolism, uptake or secretion and the other member of said pair of primers hybridizes to a second conserved region of said nucleic acid encoding a protein that participates in translation, replication, recombination and repair, transcription, nucleotide metabolism, amino acid metabolism, lipid metabolism, uptake, secretion, antibiotic resistance, virulence, or pathogenicity wherein said first and second conserved regions flank a variable nucleic acid region which when amplified creates unique base composition signatures ~~varies in base composition among~~ at least eight bioagents;

obtaining a sample suspected of comprising at least one bioagent;

amplifying nucleic acid from one or more of said at least one bioagent with said pair of oligonucleotide primers to produce an amplification product;

determining the molecular mass of said amplification product by mass spectrometry;

calculating the base composition of said amplification product from said molecular mass; and

identifying one or more of said at least one bioagent by comparing said base composition to ~~[[8]]~~ nineteen or more previously calculated or measured base compositions from amplification products of known bioagents produced by using said at least one pair of oligonucleotide primers.

32. (previously presented) A method of claim 31 wherein the sample is an environmental sample.

33. (previously presented) A method of claim 32 wherein the environmental sample is a water sample.

34. (previously presented) A method of claim 32 wherein the environmental sample is a soil sample.

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35. (previously presented) A method of claim 32 wherein the environmental sample is a surface swab sample.
36. (previously presented) A method of claim 32 wherein the environmental sample is from a building or a container.
37. (previously presented) A method of claim 31 wherein the sample is a product sample.
38. (previously presented) A method of claim 37 wherein the product sample is a foodstuff.
39. (previously presented) A method of claim 37 wherein the product sample is a cosmetic.
40. (previously presented) A method of claim 31 wherein the molecular mass of the amplification product is determined by ESI-TOF mass spectrometry.
41. (previously presented) A method of claim 31 wherein the bioagent is a bacterium, virus, mold, fungus or parasite.
42. (previously presented) The method of claim 31 wherein said identifying step identifies said one or more bioagents at the genus level.
43. (previously presented) The method of claim 31 wherein said identifying step identifies said one or more bioagents at the species level.
44. (previously presented) The method of claim 31 wherein said identifying step identifies said one or more bioagents at the sub-species level.
45. (canceled)
46. (previously presented) The method of claim 1 wherein said identifying identifies two or more of said at least one bioagent.

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47. (previously presented) The method of claim 46 wherein said two or more of said at least one bioagent are from two or more different genres of organism.

48. (previously presented) The method of claim 46 wherein said two or more of said at least one bioagent are from two or more different species of organism.

49. (canceled)

50. (previously presented) The method of claim 31 wherein said identifying identifies two or more of said at least one bioagent.

51. (previously presented) The method of claim 50 wherein said two or more of said at least one bioagent are from two or more different genres of organism.

52. (previously presented) The method of claim 50 wherein said two or more of said at least one bioagent are from two or more different species of organism.

53. (new) The method of claim 17 wherein the one or more bioagents are from a genus comprising *Acinetobacter*, *Aeromonas*, *Bacillus*, *Bacteriodes*, *Bartonella*, *Bordetella*, *Borrelia*, *Brucella*, *Burkholderia*, *Campylobacter*, *Chlamydia*, *Chlamydophila*, *Clostridium*, *Coxiella*, *Enterococcus*, *Escherichia*, *Francisella*, *Fusobacterium*, *Haemophilus*, *Helicobacter*, *Klebsiella*, *Legionella*, *Leptospira*, *Listeria*, *Moraxella*, *Mycobacterium*, *Mycoplasma*, *Neisseria*, *Proteus*, *Pseudomonas*, *Rhodobacter*, *Rickettsia*, *Salmonella*, *Shigella*, *Staphylococcus*, *Streptobacillus*, *Streptomyces*, *Treponema*, *Ureaplasma*, *Vibrio*, *Yersinia* or combinations thereof.

54. (new) The method of claim 41 wherein the one or more bioagents are from a genus comprising *Acinetobacter*, *Aeromonas*, *Bacillus*, *Bacteriodes*, *Bartonella*, *Bordetella*, *Borrelia*, *Brucella*, *Burkholderia*, *Campylobacter*, *Chlamydia*, *Chlamydophila*, *Clostridium*, *Coxiella*, *Enterococcus*, *Escherichia*, *Francisella*, *Fusobacterium*, *Haemophilus*, *Helicobacter*, *Klebsiella*, *Legionella*, *Leptospira*, *Listeria*, *Moraxella*, *Mycobacterium*, *Mycoplasma*, *Neisseria*, *Proteus*, *Pseudomonas*, *Rhodobacter*, *Rickettsia*, *Salmonella*,

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Shigella, Staphylococcus, Streptobacillus, Streptomyces, Treponema, Ureaplasma, Vibrio, Yersinia or combinations thereof.

55. (new) The method of claim 41 wherein the one or more virus bioagents are from a viral family comprising *Filoviridae, Flaviviridae, Arenaviridae, Bunyaviridae, Adenoviridae, Picornaviridae, Togaviridae, Coronaviridae* or combinations thereof.